WALLA WALLA RIVER BASIN FISH HABITAT IMPROVEMENT 9606400

SHORT DESCRIPTION:
riparian restoration and implement the needed measures to correct the problem. II. Implement demonstration projects that integrate acceptable conservation practices with Best Management Practices to conserve soil, prevent erosion, improve water quality, restabilize stream banks and restore riparian zones.

SPONSOR/CONTRACTOR: Walla Walla Co. C.D.
Walla Walla County Conservation District
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SUB-CONTRACTORS:
*Please note until amount of funds has been determined, actual project budgets and contractors to be hired cannot be completed.

GOALS

GENERAL:
Supports a healthy Columbia basin, Provides needed habitat protection, Program coordination or planning

WATERSHED:
Implementation

ANADROMOUS FISH:
Habitat or tributary passage

NPPC PROGRAM MEASURE:
No data file

RELATION TO MEASURE:
This project relates to the measures that the NPPC is using to implement habitat improvements through the protection of spawning habitat for native and Anadromous fish populations by stabilizing degraded streambanks in critical areas, restoring riparian areas, improving upland practices and developing local watershed management teams to prioritize the natural resources of the basin and its critical areas of need on a holistic watershed approach.

TARGET STOCK	LIFE STAGE	MGMT CODE (see below)
Walla Walla Basin Chinook,Coho & Chum Salmon		E
Mill Creek Bull Trout	All	P,N
Walla Walla Basin Steel head	Egg, smolt, spawning adults	P

AFFECTED STOCK	BENEFIT OR DETRIMENT
Local mammals: deer, rabbits, rodents, etc.	Beneficial
Upland Birds/Song birds/ Migratory Waterfowl	Beneficial

BACKGROUND

Stream name:
Mill Creek, Walla Walla River and Touchet River

Stream miles affected:
Throughout the entire county

Subbasin:
Walla Walla

Land ownership:
Private and Public

Habitat types:
Riparian areas and upland practices

HISTORY:
Walla Walla County does not have approved watershed management plans for its watersheds. Historically, the conservation effort

s have been done on an emergency basis, sort of a "band-aid" approach, due to lack of coordinated efforts to develop a plan to deal with watershed management as an entire system.

Part of the problem is the lack of a strong public educational program needed to stress the importance of maintaining and protecting the watersheds as whole, functioning systems that nature has designed with a specific job to do ... increase the water holding capacity of the land, decrease soil erosion & transportation of sediment, improve water quality, and provide valuable fish and wildlife habitat.

The Walla Walla River, the Touchet River, and Mill Creek have all been identified as threatened or impaired waters on the Washington State Department of Ecology's 1996 proposed 303d list (Threatened and Impaired Water Bodies in Washington State).

Water quality problems identified include: Temperature that is not suitable to anadromous fish species (site specific), and excessive levels of pH, fecal coliform, DDT, nitrates, and pesticides; and excessive transportation and deposition of sediment in spawning areas.

BIOLOGICAL RESULTS ACHIEVED:

In the past we have mainly worked with the farmers uphill from the waterways to stress Best Management Practices that reduce water runoff and soil erosion into the water. We have installed terraces, filter strips, grass waterways, cross slope farming, conservation tillage, etc.In recent years, there have been a minimal amount of conservation or stabilization projects done in stream. This is a new concept to many farmers and they need to be educated on the importance of watershed management. We have a few farmers who want to improve fish habitat and the county is still in its infancy in restoration of fish habitat and increasing native stock populations.During the 1996 year we implemented 6 Fish Habitat Enhancement/Riparian Restoration Projects on the Walla Walla River and Mill Creek.

ADAPTIVE MANAGEMENT IMPLICATIONS:

Knowledge gained from this project will help to develop a standard operating procedure when dealing with identified watershed projects in Walla Walla County. Guidelines will be established, outlining acceptable specifications and practices that will be beneficial to the health of the watershed as a whole system. Practices that will be considered to have a detrimental effect (physically, and economically) to those who live either upstream or downstream will not be approved for funding.Demonstration restoration projects will be established for educational purposes; to measure success of various integrated conservation practices; and set an example for producers in Walla Walla County and across the state.

PURPOSE AND METHODS

SPECIFIC MEASUREABLE OBJECTIVES:

1. An approved comprehensive watershed plan will be completed and ready for implementation.
2. Water quality will improve due to restoring of riparian zones and stabilizing streambanks thereby:
   a. reducing sediment flow and siltation.
   b. improving filtration of agricultural water runoff into the rivers.
   c. increasing the land's natural water holding capacity thereby replenishing the shallow aquifers.
3. Fish wildlife habitat will be improved thereby:
   a. improving the temperatures of the water.
   b. reducing siltation of gravel spawning beds.
   c. improving water quality.
   d. improving protective overwintering habitat, thereby
   e. increasing populations of native anadromous fish species.

CRITICAL UNCERTAINTIES:

The following factors effect the success of this project:

1. Lack of funding - We have many farmers in Walla Walla County who want to do conservation projects but can't afford to pay for the whole project out of their pockets.
2. Cooperation between watershed users - conservation projects have been piece-meal, here and there, in the past along the watersheds.

3. Unpredictable weather conditions - Adverse weather conditions may affect the success of the implementation portion of this project. Bio-engineering may be effected by flooding at times.
4. Public Education - Fish Habitat Enhancement projects are new in the Walla Walla Basin and land owners need to be educated.

BIOLOGICAL NEED:

The waters of the Walla Walla River, the Touchet River, and Mill Creek have been identified on the Washington State Department of Ecology's 303d list, Threatened and impaired Waterbodies in Washington State.

Lack of healthy riparian zones; unhealthy temperature levels; low dissolved oxygen; and fecal coliform, pH, nitrates and pesticides have been found to be in excessive levels contributing to unhealthy fish habitat.

Excessive amounts of sediments wash into the rivers causing siltation and, in turn, the destruction of gravel spawning beds and suffocation of eggs of Anadromous fish.

Lack of established riparian zones has contributed to loss of streambanks, soils and spawning areas during flooding; excessive summer water temperatures; lack of protective winter habitat which leaves the fish open to heavy predation.

Restoration of riparian zones and streambank stabilization should improve water quality by improved filtration of agricultural water, sediment trapping, reducing soil erosion and sediment transport and vastly improving fish & wildlife habitat.

HYPOTHESIS TO BE TESTED:

Restoration of lost and damaged riparian zones, along with destruction and loss of farm land, due to unstable streambanks, will be monitored visually as to the efficiency of the newly stabilized streambanks and the vegetative growth coming back in riparian areas.Cutting away of productive farm land by rivers should be physically reduced or stopped, water quality can be monitored and the restoration of native fish runs can be recorded in the years to come.

ALTERNATIVE APPROACHES:

N/A

JUSTIFICATION FOR PLANNING:

N/A These funds will be going into implementation of Fish Habitat Enhancement Projects.

METHODS:

The watershed management plan will:

1. Identify the different groups using the watershed.
2. Identify the function of a healthy watershed.
3. Identify the components of a healthy watershed.
4. Identify critical areas in Walla Walla County watersheds that are in need of streambank stabilization and riparian zone restoration.
5. Stress the importance of cooperation between adjacent land users, the public and all entities involved in sharing the watersheds.
6. Provide the needed guidelines to provide proper procedures to follow when planning and implementing individual site restoration projects that will benefit the entire watershed system.
7. Provide the needed foundation to develop an intensive watershed management educational program that can be presented to farmers, the public school systems and to all interested community service and youth organizations.

It is the goal of this office to help farmers reduce soil loss, water runoff, improve water quality and restore healthy riparian zones to improve the watershed's natural function and to restore desirable habitat that is required to increase anadromous fish populations.

Fish populations should increase if:
1. The farmers and the public are properly educated on the importance of healthy watersheds and their benefits.
2. Aquatic education curriculum would be included as part of the public schools curriculum. Information could be taught as an integrated curriculum to compliment science, math, history, reading and English requirements.

3. School classes were supplied with aquariums, cooling units and 500,000 salmon eggs to raise, study and release into our watersheds.
4. Streambank stabilization and riparian restoration projects were implemented along our streams.

PLANNED ACTIVITIES

SCHEDULE:

Planning Phase **Start** 1/97 **End** 12/2001 **Subcontractor**

Task 1997

1. Identify the watershed users.
2. Start a Walla Walla County Watershed Alliance.
3. Develop a comprehensive cooperative watershed plan for approval.
4. Identify critical areas in need of stabilization and restoration.
5. Develop a demonstration project for each watershed using integrated farm practices and conservation efforts.
6. Start implementation of demonstration projects.
7. Document the watersheds progress through development of an educational video (with before and after pictures).
8. Set up testing sites for water quality monitoring.
9. Start development of a watershed management educational program.
10. Give educational presentations to farmers, public organizations and school groups.

1998-2001

1. Critique projects from the previous year.
2. Walla Walla County Watershed Alliance will meet quarterly.
3. Develop a quarterly Watershed Newsletter for distribution.
4. Continue to develop and implement watershed restoration projects throughout the county.
5. Initiate "Walla Walla County Conservation Days" to promote watershed management. (annually)
6. Set up an educational booth at the county fair each year.
7. Continue making educational presentations to farmers, community organizations and school groups.
8. Implement water quality monitoring with the cooperation of the State fisheries biologists and the local science and agriculture classes (public schools and colleges).
9. Keep the local media informed as to the progress that we are making in Walla Walla County.

Implementation Phase **Start** 7/31/97 **End** 10/31/98 **Subcontractor**

Task Install Fish Habitat Enhancement/Streambank Stabilization/Riparian Restoration Projects

O&M Phase **Start** 1/98 **End** 10/31/98 **Subcontractor**

Task Repair damage to 1996-97 Implementation Projects

PROJECT COMPLETION DATE:

1998

OUTCOMES, MONITORING AND EVALUATION

SUMMARY OF EXPECTED OUTCOMES

Expected performance of target population or quality change in land area affected:

The following results are expected:

1. A completed, approved watershed management plan for the Walla Walla River, The Touchet River and Mill Creek.
2. Improved watershed health resulting in:
   a. Improved water quality.
   b. Improved fish & wildlife habitat.
   c. An increase in fish populations.
   d. Streambank stabilization.
   e. Better flood damage reduction.

f. A reduction in soil erosion and sediment transportation.
3. An extensive watershed management educational program.
4. An increase in public awareness, support and involvement.
5. Monitoring of water quality on the rivers.
6. An increase in the numbers of conservation projects on the ground.
7. A watershed alliance group that will meet quarterly.

Present utilization and convservation potential of target population or area:
The majority of the land in the Walla Walla Basin is private farmland/timberland. Local landowners seem to be receptive to conservation practices to improve water quality, reduce soil erosion/stream bank degradation and improve riparian areas and fish habitat. Healthy riparian areas are being lost due to bank damage during flooding. Land owners want to improve bank stability and restore riparian habitat.

Assumed historic status of utilization and conservation potential:
Farmers throughout the Walla Walla Basin already use Best Management Farm Practices established by the USDA-Natural Resources Conservation Service (NRCS).

Long term expected utilization and conservation potential for target population or habitat:
The long term goal is to stabilize and restore as much riparian areas in the Basin as possible and to protect the healthy spawning habitat that the Native/Anadromous fish population are currently using.

Contribution toward long-term goal:
The development of public awareness for watershed management, healthy riparian areas, Best Management farm Practices in Upland areas and the enhancment of fish habitat.

Indirect biological or environmental changes:
Hopefully in future years we will have an increase in year round in stream flows and that will allow us to reintroduce salmon back into the Walla Walla Basin with the help of the Confederated Tribes of the Umatilla Indian Reservation, Washington and Oregon Departments of Fish & Wildlife and the National Marine Fisheries Institute.

Physical products:
The actual miles of fish habitat enhanced is directly related to the budget and must be calculated each year. As the budget fluctuates and construction costs change the amount will vary from year to year .

Environmental attributes affected by the project:
Hopefully temperatures will improve in critical areas over the years as new restored riparian areas begin to mature. Water quality in spawning areas should increase in relationship to stabilized streambanks over the years.

Changes assumed or expected for affected environmental attributes:
Short term effects: stabilize degrading banks and replant lost riparian areas in critical areas. Long term effects: Cooler temperatures, enhanced spawning areas, improved water quality and a reduction in bank erosion.

Measure of attribute changes:
Not known at this time (Beyond my professional expertise)

Assessment of effects on project outcomes of critical uncertainty:
We will be working with the Fish & Wildlife Departments for Washington and Oregon, as well as the Confederated Tribes of the Umatilla Indian Reservations.

Information products:
Hopefully these projects will provide the start of a data base for future scientific approaches.

MONITORING APPROACH

The watershed management plan will:
1. Identify the different groups using the watershed.
2. Identify the function of a healthy watershed.
3. Identify the components of a healthy watershed.
4. Identify critical areas in Walla Walla County watersheds that are in need of streambank stabilization and riparian zone restoration.
5. Stress the importance of cooperation between adjacent land users, the public and all entities involved in sharing the watersheds.
6. Provide the needed guidelines to provide proper procedures to follow when planning and implementing individual site restoration projects that will benefit the entire watershed system.
7. Provide the needed foundation to develop an intensive watershed management educational program that can be presented to farmers, the public school systems and to all interested community service and youth organizations.
8. Monitor and evaluate the success of implementation projects.

It is the goal of this office to help farmers reduce soil loss, water runoff, improve water quality and restore healthy riparian zones to improve the watershed's natural function and to restore desirable habitat that is required to increase anadromous fish populations.

Fish populations should increase if:
1. The farmers and the public are properly educated on the importance of healthy watersheds and their benefits.
2. Aquatic education curriculum would be included as part of the public schools curriculum. Information could be taught as an integrated curriculum to compliment science, math, history, reading and English requirements.
3. School classes were supplied with aquariums, cooling units and 500,000 salmon eggs to raise, study and release into our watersheds.
4. Streambank stabilization and riparian restoration projects were implemented along our streams.

Provisions to monitor population status or habitat quality:

The local Habitat Biologist for the Washington Department of Fish & Wildlife as guidelines that he uses in helping us locate the ideal sites and what type of bio-engineering he will approve.

Data analysis and evaluation:

We will be working closely with the Tribal Habitat Biologist, as well as the Department of Fish and Wildlife.

Information feed back to management decisions:

We will give annual reports. And follow up over the years to compare the different ages of succession in newly established riparian areas.

Critical uncertainties affecting project's outcomes:

Through public education and the implementation of successful fish habitat enhancement projects, more land owners will want to participate. Through the development and implementation of sound watershed management practices future flood damage may be reduced.

EVALUATION

Project success could be the protection of healthy riparian/spawning areas, the stabilization of stream banks, a decrease in stream temperatures, an increase in year round in-stream flows, a stability in the steelhead/bull trout population and the reintroduction of salmon into the basin.

Incorporating new information regarding uncertainties:

All information will be used to modify the project to ensure its future success.

Increasing public awareness of F&W activities:

The Walla Walla County Conservation District contacts the local news media on a regular basis, writes a quarterly newsletter, hol

ds 12-14 farmer mini-sessions and an annual meeting.

RELATIONSHIPS

RELATED BPA PROJECT	RELATIONSHIP
	Early Action Fish Habitat Enhancement Implementation Projects (6)
5504400	Starting year of Habitat Improvement Project and Watershed Plan Development

OPPORTUNITIES FOR COOPERATION:

The completed watershed management plan will have to be approved by NEPA and SEPA, in cooperation with the National Resource Conservation Service, the Walla Walla County Regional Planning Office, the U.S. department of Fish & Wildlife, the Washington State department of Fish & Wildlife and the Washington State Department of Ecology.Others entities that will need to cooperate include: Local Landowners, Columbia county (Washington state) and Umatilla county (Oregon state), the water districts, Agricultural agencies, the cities, and the Confederated Tribes of Umatilla Indians.This will be a cooperative effort between three counties, two states, multiple agencies and cultures.

COSTS AND FTE

1997 Planned: $88,000

FUTURE FUNDING NEEDS:

FY	$ NEED	% PLAN	% IMPLEMENT	% O AND M
1998	$100,000	15%	70%	15%
1999	$150,000	15%	70%	15%
2000	$150,000	15%	70%	15%
2001	$150,000	15%	70%	15%
2002	$150,000	15%	70%	15%

PAST OBLIGATIONS (incl. 1997 if done):

FY	OBLIGATED
1996	$154,711
TOTAL:	$154,711

Note: Data are past obligations, or amounts committed by year, not amounts billed. Does not include data for related projects.

OTHER NON-FINANCIAL SUPPORTERS:

The Confederated Tribes of the Umatilla Indian Reservation, Washington Department of Fish & Wildlife, The U.S. Fish & Wildlife Service, USDA-NRCS, local land owners, and the Future Farmers of America.

LONGER TERM COSTS:

We would like to enhance fish habitat on an annual basis and work to bring back in-stream flows during the times of year that would make it possible to reintroduce salmon into the Walla Walla Basin.

These type of projects are not cheap, the more funding, the more miles of fish habitat enhancement.

1997 OVERHEAD PERCENT: 10%

HOW DOES PERCENTAGE APPLY TO DIRECT COSTS:

[Overhead % not provided so BPA appended older data.] Total direct project costs

CONTRACTOR FTE: 5

SUBCONTRACTOR FTE: N/A

SUPPLEMENTAL FACTORS

SUPPLEMENTAL ANADROMOUS FISH EVALUATION FACTORS:

The project integrates fish habitat enhancement which is key to survival of the populations, water quality, soil erosion control, development of a basin wide watershed management plan, resolving critical area problems/conflicts and public education.

SUPPLEMENTAL RESIDENT FISH EVALUATION FACTORS:

The project is to enhance the habitat for both Native and Anadromous fish populations, protect the healthy riparian/spawning areas and improve habitat conditions that will make the reintroduction of Salmon into the Basin possible.

SUPPLEMENTAL WILDLIFE EVALUATION FACTORS:

The project will enhance critical areas of lost riparian zones with severe degrading streambanks. The goal is to protect and create healthy riparian/spawning areas to ensure future fish population. We have a memorandum of agreement with the USDA-NRCS to make sure that all BPA projects meet with their standards and specifications.